

**U.S. Department of the Interior
Bureau of Land Management**

Environmental Assessment

**Issuance of Authorizations to Nevada Department of Wildlife for
Wildlife Water Development Inspection, Maintenance and Repairs
within BLM Wilderness Areas in Nevada**

DRAFT: December 1, 2011

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Lead Office — Ely District Office
Southern Nevada District Office



**Environmental Assessment:
Issuance of Authorizations
to Nevada Department of
Wildlife for Wildlife Water
Development Inspection,
Maintenance and Repairs
within BLM Wilderness Areas
in Nevada: DOI-BLM-NV-
L030–2012–0003–EA**

DRAFT: December 1, 2011

Table of Contents

1. Introduction	1
1.1. Identifying Information:	1
1.1.1. Title, EA number, and type of project:	1
1.1.2. Location of Proposed Action:	1
1.1.3. Name and Location of Preparing Offices:	1
1.1.4. Identify the subject function code, lease, serial, or case file number:	1
1.1.5. Applicant Name:	1
1.2. Purpose and Need for Action:	2
1.3. Scoping, Public Involvement and Issues:	3
2. Proposed Action and Alternatives	7
2.1. Aspects Common to All Alternatives	9
2.2. Description of the Proposed Action (Alternative A):	9
2.3. Description of Alternatives Analyzed in Detail	16
2.4. Alternatives Considered but not Analyzed in Detail	18
2.5. Conformance	18
3. Affected Environment:	21
4. Environmental Effects:	29
4.1. Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered	31
4.1.1. <i>Affected Environment</i>	31
4.1.2. <i>Environmental Consequences</i>	31
4.2. Threatened or Endangered Species or Critical Habitat	32
4.2.1. <i>Affected Environment</i>	32
4.2.2. <i>Environmental Consequences</i>	32
4.3.	33
4.4. Wilderness	33
4.4.1. <i>Affected Environment</i>	33
4.4.2. <i>Environmental Consequences</i>	36
5. Cumulative Effects	39
6. Tribes, Individuals, Organizations, or Agencies Consulted:	43
7. List of Preparers	47
Appendix A.	51

Appendix B.	55
Appendix C.	57
Appendix D.	59

List of Figures

Figure 2.1. Locations of Wildlife Water Developments in the Northern Wilderness Complex	12
Figure 2.2. Locations of Wildlife Water Developments in the Central Wilderness Complex	13
Figure 2.3. Locations of Wildlife Water Developments in the Southern Wilderness Complex	14
Figure 2.4. Example of a Big Game Wildlife Water Development using Fiberglass Tanks with Float-box Drinker on Full Curl (Arrow #3)	15
Figure 2.5. Example of a Big Game Wildlife Water Development using BOSS Tanks and Self-Leveling Drinker on Ford (Delamar #1)	16
Figure 2.6. Example of a Fiberglass Small Game Wildlife Water Development	16

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List of Tables

Table 6.1. List of Persons, Agencies and Organizations Consulted	45
Table 7.1. List of Preparers	49

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Chapter 1. Introduction

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1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Issuance of Authorizations to Nevada Department of Wildlife for Wildlife Water Development Inspection, Maintenance and Repairs within BLM Wilderness areas in Nevada. DOI-BLM-NV-L030-2012-003-EA. Environmental Assessment.

1.1.2. Location of Proposed Action:

The wildlife water developments occur in seven wilderness areas within the Ely and Southern Nevada Districts. For the Ely District, the wilderness units involved include Delamar Mountains Wilderness, Far South Egans Wilderness, Meadow Valley Range Wilderness, and Mormon Mountains Wilderness. For the Southern Nevada District, the wilderness units involved include Arrow Canyon Wilderness, Muddy Mountains Wilderness, and North McCullough Wilderness.

1.1.3. Name and Location of Preparing Offices:

Lead Office - Ely District Office

HC 33 Box 33500

702 N. Industrial Way

Ely, NV 89301 USA

Phone: (775) 289-1800

Southern Nevada District Office

4701 N. Torrey Pines Dr.

Las Vegas, NV 89130 USA

Phone: (702) 515-5000

1.1.4. Identify the subject function code, lease, serial, or case file number:

Case file number: NA

1.1.5. Applicant Name:

NA

1.2. Purpose and Need for Action:

The Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW) are committed to maintenance and restoration of fish and wildlife populations and habitats in Nevada within the jurisdictions of their respective agencies. The NDOW is the state agency which maintains jurisdiction with respect to fish and wildlife management on public lands. Availability and distribution of dependable waters sources in desert bighorn sheep habitat is a limiting factor to the increase in sustainable population density. In order to fulfill its mission with respect to fish and wildlife management, the NDOW has installed big and small game wildlife water developments within both the BLM Ely and Southern Nevada Districts. With the designation of wilderness in Nevada through legislation from 2002¹ and 2004², 35 big and small game wildlife water developments have now been incorporated into the boundaries of seven designated wilderness areas. The enabling legislation in these laws does not affect or diminish the jurisdiction of the NDOW with respect to fish and wildlife management. Section 208(b) and Section 209(b) of CCCPLNRA and LCCRDA, respectively, states: “In furtherance of the purposes and principles of the Wilderness Act, management activities to maintain or restore fish and wildlife populations and the habitats to support such populations *may* (emphasis added) be carried out within wilderness....where consistent with relevant wilderness management plans, in accordance with appropriate policies such as those set forth in Appendix B of House Report 101–405, including the occasional and temporary use of motorized vehicles, if such use....would promote healthy, viable, and more naturally distributed wildlife populations that would enhance wilderness values and accomplish those purposes with the minimum impact necessary to reasonably accomplish the task.”

Furthermore Sec. 208(c) and Sec. 209(c) of CCCPLNRA and LCCRDA, respectively, state: “Consistent with section 4(d)(1) of the Wilderness Act and in accordance with appropriate policies such as those set forth in Appendix B of House Report 101–405, the State *may* (emphasis added) continue to use aircraft, including helicopters to survey, capture, transplant, monitor, and provide water for wildlife populations, including bighorn sheep....” And Sec. 208(d) and Sec. 209(d) of CCCPLNRA and LCCRDA, respectively, state: “Subject to subsection (f), the Secretary shall, authorize structures and facilities, including existing structures and facilities, for wildlife water development projects, including guzzlers, in the wilderness areas...if (1) the structures and facilities will....enhance wilderness values by promoting healthy, viable, and more natural distributed wildlife populations.”

The policy and guidelines referred to in Appendix B of House Report 101–405 are intended to provide guidance to State and Federal personnel for the management of fish and wildlife in wilderness in accordance Wilderness Act. The guidelines serve as a framework for cooperation among the BLM and the States in the coordination of fish and wildlife management and in the development of cooperative agreements or other management plans. The policies and guidelines were developed within the overall context of the purpose and direction of the Wilderness Act. The general policy is that fish and wildlife “management activities will be guided by the principle of doing only the minimum necessary to manage the area as wilderness” and “specific on-the-ground conditions will result in slightly different application of these guidelines in so vast a system.” The House Report references Section 4(c) of the Wilderness Act and goes on to state: “The emphasis is on the management of the area as wilderness as opposed to the management of a particular resource. This language is viewed as direction that all management activities within wilderness

¹Clark County Conservation of Public Land and Natural Resources Act of 2002 (CCCPLNRA); Public Law 107–282

²Lincoln County Conservation, Recreation, and Development Act of 2004 (LCCRDA); Public Law 108–424

be done without motor vehicles, motorized equipment, or mechanical transport, unless truly necessary to administer the area.... It means that any such use should be rare and temporary; that no roads can be built; and that wilderness managers must determine such use is the minimum necessary to accomplish the task. Any use of motorized equipment or mechanical transport requires advance approval by the administering agency.”

Per the enabling legislation, the BLM and NDOW entered into a Memorandum of Understanding³ (MOU) to specify the terms and conditions under which NDOW (including its designee) may use wildlife management activities in the wilderness areas designated by these titles. The current MOU reiterates the language in the aforementioned laws and policies regarding use of motorized equipment in Section VA. where it states: “The language in the Wilderness Act is viewed as direction that all management activities within BLM Wilderness in Nevada be done without motor vehicles, landing of aircraft, motorized equipment, or mechanical transport, unless truly necessary to administer the area as Wilderness....Where the use of aircraft and motorboats have already become established prior to wilderness designation, they may be permitted to continue subject to such restrictions as the BLM deems desirable. The language in the Wilderness Act means that any such use should be rare and temporary, that no roads can be built, and that wilderness managers must determine such use is the minimum necessary to accomplish the task. Any on-the-ground use of motorized equipment or mechanical transport requires advance approval by the BLM.”

Therefore, the NDOW annually submits an annual operations and maintenance schedule of proposed fish and wildlife management activities, projects, and developments planned within BLM Wilderness in the Ely and Southern Nevada Districts. Activities, projects, and developments must be submitted, with the exception of specifically identified actions in the MOU, if they among other items: (1) involve one or more of the prohibited uses identified in Section 4(c) of the Wilderness Act (i.e., use of motor vehicles, use of motorized equipment, landing of aircraft, mechanical transportation) and/or; (2) may potentially be surface disturbing. These annual operations and maintenance requests have included requests for permission to inspect, maintain, and repair wildlife water developments. While big game, small game and bird water developments are located within designated wilderness in Nevada, NDOW’s requests are primarily directed toward big game wildlife water developments. Each year, after completing public notifications, minimum requirement decision guide (MRDG) analyses and National Environmental Policy Act (NEPA) examinations such as environmental assessments (EAs), based on the NDOW requests, BLM Districts have granted such permission with appropriate terms and conditions attached. This EA will provide programmatic guidance by which the NDOW will annually inspect, maintain, and repair big game, small game, and bird wildlife water developments within these seven designated Wilderness areas on a multiple-water development, multiple-year basis so long as conditions at each water development site remain relatively constant.

1.3. Scoping, Public Involvement and Issues:

A Notice of Proposed Actions, Lands in Wilderness was released on October 20, 2011, when the project was first initiated. This notification was distributed to the Ely District and Southern Nevada District Wilderness mailing lists, and to interested parties. Comments for this public scoping period were accepted until November 25, 2011. Four comments were received.

³Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife, Wildlife Management in Nevada BLM Wilderness Areas (BLM MOU 6300-NV930-0402), 2003

For the Ely District, the project was scoped internally in the Schell Field Office on October 3, 2011 and in the Caliente Field Office on October 25, 2011. It was scoped in the Southern Nevada District Office on October 19, 2011.

A 30-day public comment period on the draft EA was initiated on December 1, 2011 and published on the ePlanning Front Office website on the same day. All parties on the Ely District Wilderness and Southern Nevada District Wilderness mailing lists, and interested parties were notified of the comment period.

Major issues identified are as follows:

- Impacts to wilderness resulting from inspection, maintenance, and repair activities.
- Impacts to desert tortoise.
- Ability to collectively inspect and maintain many developments in succession and in a short timeframe.
- Pack teams or foot crews would result in greater impacts (create trails, erosion, encourage illegal motorized vehicles) than helicopter use.
- Use of helicopter would result in less impact to recreation, and the duration visual and auditory impacts when compared to ground vehicles or numerous people on foot or stock.
- Surface disturbance resulting from helicopter landings is less than with foot or stock, or ground vehicles.

Certain issues identified during public scoping are already addressed in existing planning documents or policy, or are out of scope of this document:

- Visual helicopter inspections/overflights occur annually therefore the additional intrusion from landing should be considered negligible. — The BLM doesn't manage air space; and touch-down of aircraft in wilderness is prohibited by law.
- Programmatic EA is unnecessary and a revision of the NDOW-BLM MOU is needed. — Not within the scope of this project. The decisions within this programmatic EA will be incorporated into the MOU.
- Determination of this EA should apply to future wilderness designations. — The language of future legislation and potential wilderness boundaries would determine wildlife water development policy.

The programmatic Environmental Assessment (EA) would encompass actions necessary for inspection, maintenance and repair of 15 big game and 20 small game wildlife water developments in seven designated wilderness areas within the Ely and Southern Nevada Districts.

Inspection is the act of viewing or examining all components of the wildlife water development for water level and proper functioning. Maintenance is the act of retaining all components of the water development in a good condition and repair is the act of restoring all components of the water development to a good or sound condition.

Decisions and policies emanating from this programmatic environmental assessment would supersede the decisions and policies in existing approved wilderness management plans related

to these wildlife water developments. Decisions and policies derived from this programmatic environmental assessment would also replace decisions and policies in other documents related to inspection, maintenance and repair of these 35 wildlife water developments currently located within the seven designated wilderness areas in the BLM Southern Nevada or Ely Districts.

This programmatic EA does not cover actions related to new construction, or replacement. New construction is the act of building or assembling all of the new components of a wildlife water development. New construction may include the redesign, reconfiguration, or alteration of the components or the capacities of an existing wildlife water development. Replacement is the physical substitution or reconstruction of a whole component or of all components of a wildlife water development. Replacement actions could include installation of a new storage tank, trough, pipeline, collection apron, dam or other major component of the water development. New construction or wildlife water developments needing replacement would require public notification, a “minimum requirement decision guide” assessment and a site-specific NEPA analysis. Replacement of portions of components (a portion of the pipeline) or smaller components (e.g. float ball, johnson screen) would be covered under this EA. Furthermore, this programmatic EA will not alter the “Immediate Actions and Procedures” (Section VII.) of the MOU between BLM and NDOW. Such actions include those requiring immediate attention due to unanticipated natural or human-caused circumstances (e.g., flood, vandalism, sick animal), that directly and immediately jeopardize the survival of fish and wildlife under the NDOW’s jurisdiction.

Motorized vehicles, motorized equipment⁴ and mechanical transport⁵ may be necessary for inspection, maintenance or repairs of wildlife water developments. By definition in the 6300 Wilderness Management regulations, motorized vehicles means any vehicle that is self-propelled. Motorized equipment means any machine that uses or is activated by a motor, engine or power source (e.g., chainsaws, power drills, generators, helicopters).

⁴Motorized equipment is defined as any machine that uses or is activated by a motor, engine, or other power source. This includes, but is not limited to, chainsaws, power drills, aircraft, generators, motorboats, motor vehicles, snowmobiles, tracked snow vehicles, snow blowers or other snow removal equipment, and all other snow machines. The term does not include shavers, wrist watches, clocks, flashlights, cameras, camping stoves, cellular telephones, radio transceivers, radio transponders, radio signal transmitters, ground position satellite receivers, or other similar small handheld or portable equipment. (CFR 6301.5)

⁵Mechanical transport is defined as any vehicle, device, or contrivance for moving people, material in or over land, water, snow, or air that has moving parts. This includes, but is not limited to, sailboats, sailboards, hang gliders, parachutes, bicycles, game carriers, carts and wagons. The term does not include wheelchairs, nor does it include horses or other pack stock, skis, snowshoes, non-motorized water craft including, but not limited to, drift boats, rafts, and canoes, or sleds, travois, or similar devices without moving parts. (CFR 6301.5)

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Chapter 2. Proposed Action and Alternatives

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2.1. Aspects Common to All Alternatives

One MRDG analysis was completed for all the wildlife water developments in order to determine the type of tool(s) necessary to complete maintenance and repairs. That MRDG determined that motorized equipment (e.g. power drills, power saws, generators) and mechanical transport (e.g. wheelbarrows or carts) for repairs and maintenance was the minimum necessary. Regardless of the access method described in each of the following action alternatives (Alternatives A – D), motorized equipment and mechanical transport are proposed for use on an as needed basis in the seven wilderness areas for maintenance or repair of the wildlife water developments. This does not include bicycles, helicopters or motor vehicles. Helicopters and motor vehicles are analyzed under Alternatives A, B and C, specifically. To request a copy of the MRDG, contact Emily Simpson, Wilderness Planner at esimpson@blm.gov or Sendi Kalcic, Wilderness Specialist at skalctic@blm.gov.

2.2. Description of the Proposed Action (Alternative A):

A MRDG assessment was completed for inspection, maintenance and repair for each wildlife water development in order to determine the minimum type of access method necessary to administer the area as wilderness while still accomplishing the task. Each of the three access method alternatives below (helicopter, ground vehicle, and foot or pack stock) were evaluated in each MRDG. The Proposed Action is the combination of the access determinations from the MRDGs for each individual water development and the motorized equipment/mechanical transport tool determination. See Appendix A for the table of information regarding each of the 35 wildlife water developments, and the proposed action for each method of access (e.g. helicopter, ground vehicle or foot/stock). In summary, 15 of the 20 big game wildlife water developments are proposed to be inspected, maintained, and repaired utilizing a helicopter and the remaining 5 would be inspected, maintained, and repaired by foot or with pack stock, as the minimum tool. All 15 small game wildlife water developments are proposed to utilize foot or pack stock for inspection, maintenance and repair.

Proposed action summary:

Type of Wildlife Water Development	Helicopter	Motorized Ground Vehicle	Foot or Pack Stock
Big Game	Ely District – 13	Ely District – 0	Ely District – 3
	Southern Nevada District – 2	Southern Nevada District – 0	Southern Nevada District – 2
Small Game	Ely District – 0	Ely District – 0	Ely District – 15
	Southern Nevada District – NA	Southern Nevada District – NA	Southern Nevada District – NA

Under the Proposed Action, a helicopter would land near one of the 15 wildlife water developments and off-load passengers, materials and equipment, as needed, for inspection, maintenance and repair of the wildlife water development. Landing zones have been established for all big game water developments within wilderness. Small game landing zones would utilize nearby closed or open routes. If the landing is for a quick inspection, the pilot may land and wait for the inspection to be completed. Alternatively, if several developments are to be inspected by helicopter within proximity, passengers may be dropped off at one water development, while other passengers are dropped off at a second water development. For multiple water development

inspections in a region, this pattern could continue, rotating groups of passengers from water development to water development, until all developments are inspected. See Appendix A for helicopter landing zone distance to site. The remaining 18 wildlife water developments would be inspected by foot or pack stock by traveling cross-country or on designated trails where available. Materials and equipment would also be transported to the site by foot or pack stock when needed for maintenance or repairs. Species of domestic animals known to have the potential to transmit disease causing catastrophic or chronic mortality to native wildlife would be prohibited. Mileage and elevation change from the nearest motorized access point is detailed in Appendix A.

In order to minimize the impacts to wilderness character, the following measures will apply to the inspection, maintenance and repair of wildlife water developments within the Ely and Southern Nevada Districts:

- Timing will consider visitor use of the area and whenever possible, will be scheduled during periods when visitor use is low (i.e., weekdays).
- NDOW will provide to the respective BLM office on an annual basis a summary of activities for each of the wildlife water developments to include: number of days and type of motorized vehicles and/or motorized equipment utilized for access to wildlife water developments, and; number of days and type of motorized equipment and/or mechanical transport utilized for repairs and maintenance.
- Participants will utilize Leave No Trace practices while traveling within designated wilderness.

The Ely District Resource Management Plan (RMP) contains seasonal timing recommendations to minimize impacts to a variety of wildlife species. The following management decisions appear in the Ely District RMP and may pertain to the inspection, maintenance, and repair of some of the wildlife water developments located within the Ely District and analyzed in this EA:

WL-6: Where appropriate, restrict permitted activities in big game calving/fawning/kidding/lambing grounds and crucial summer range from April 15 through June 30.

WL-13: Where appropriate, restrict permitted activities within occupied desert bighorn sheep habitat from March 1 through May 31 and July 1 through August 31.

SS-4: Where appropriate, restrict permitted activities from May 1 through July 15 within 0.5 mile of raptor nest sites unless the site has been determined to be inactive for at least the previous 5 years.

SS-32: Where appropriate, restrict permitted activities from March 1 through October 31 within desert tortoise habitat.

A synthesis of these seasonal recommendations resulted in the following minimization and avoidance measures:

- The recommended seasonal timeframe for water development inspections is August 31 through February 28/29.
- The recommended seasonal timeframe for inspection of wildlife water developments in desert tortoise habitat is November 1 through February 28/29.

These recommendations are in an effort to avoid and/or minimize impacts to several species. However, the BLM acknowledges that many of the methods used to survey and monitor for

these species may currently occur outside of these timeframes and employ a variety of methods analyzed in this EA.

Additional avoidance and minimization measures have been identified in desert tortoise habitat:

- Prior to initiation of an activity within desert tortoise habitat, a desert tortoise awareness program shall be presented to all personnel who will be on-site, including but not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. This program will contain information concerning the biology and distribution of the desert tortoise and other sensitive species, their legal status and occurrence in the project area; the definition of "take" and associated penalties; speed limits; the terms and conditions of this biological opinion including speed limits; the means by which employees can help facilitate this process; responsibilities of workers, monitors, biologists, etc.; and reporting procedures to be implemented in case of desert tortoise encounters or noncompliance with this biological opinion
- A litter-control program shall be implemented to minimize predation on tortoises by ravens drawn to the project site. This program will include the use of covered, raven-proof trash receptacles, removal of trash from project areas to the trash receptacles following the close of each work day, and the proper disposal of trash in a designated solid waste disposal facility. Appropriate precautions must be taken to prevent litter from blowing out along the road when trash is removed from the site. The litter-control program will apply to all actions. A litter-control program will be implemented by the responsible federal agency or their contractor, to minimize predation on tortoises by ravens and other predators drawn to the project site.
- A speed limit of 25 miles per hour will be required for all vehicles on the project site and unposted dirt access roads.
- Prior to moving all vehicles or equipment, an inspection will be performed to insure no desert tortoises are present.
- All vehicular traffic will be restricted to existing access roads, or those roads approved by the BLM authorized officer in consultation with the U.S. Fish and Wildlife Service.

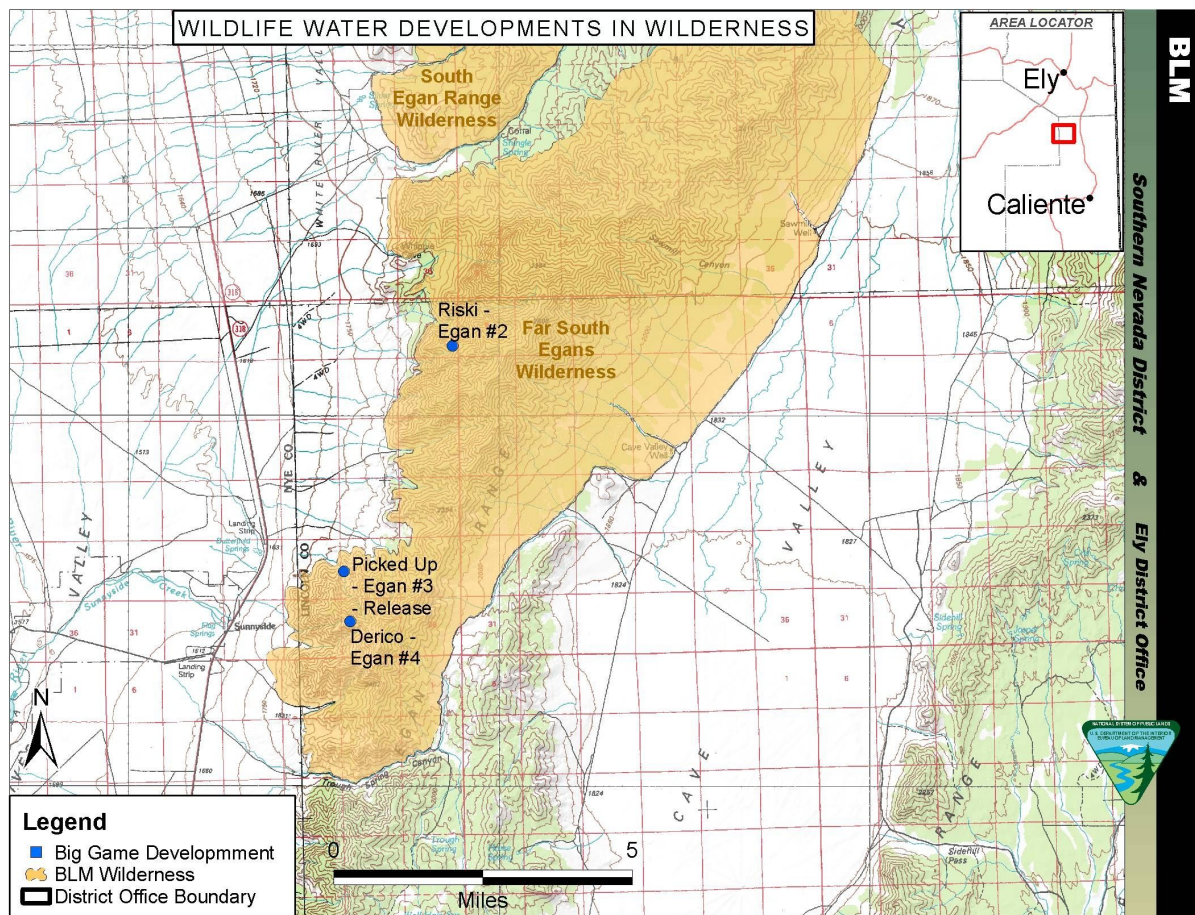


Figure 2.1. Locations of Wildlife Water Developments in the Northern Wilderness Complex

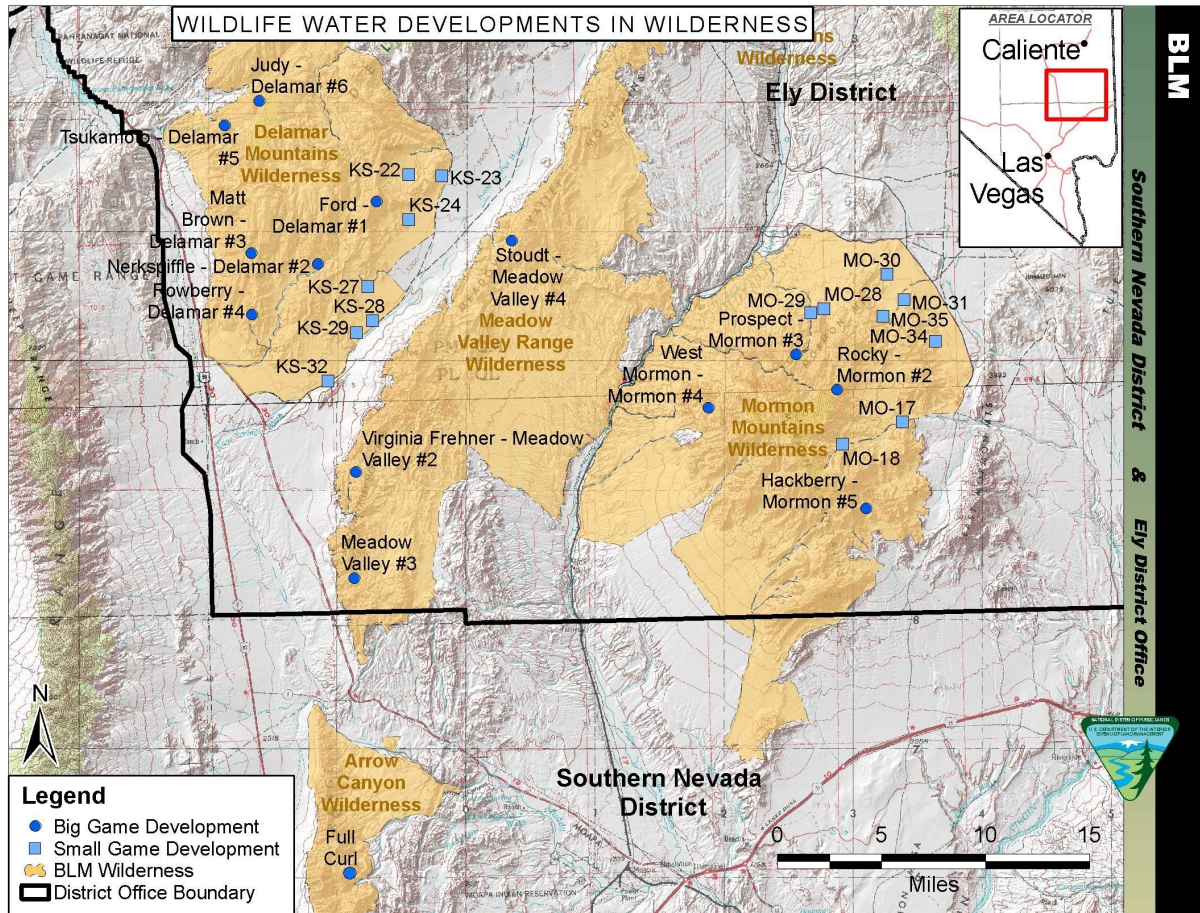


Figure 2.2. Locations of Wildlife Water Developments in the Central Wilderness Complex



Figure 2.4. Example of a Big Game Wildlife Water Development using Fiberglass Tanks with Float-box Drinker on Full Curl (Arrow #3)



Figure 2.5. Example of a Big Game Wildlife Water Development using BOSS Tanks and Self-Leveling Drinker on Ford (Delamar #1)

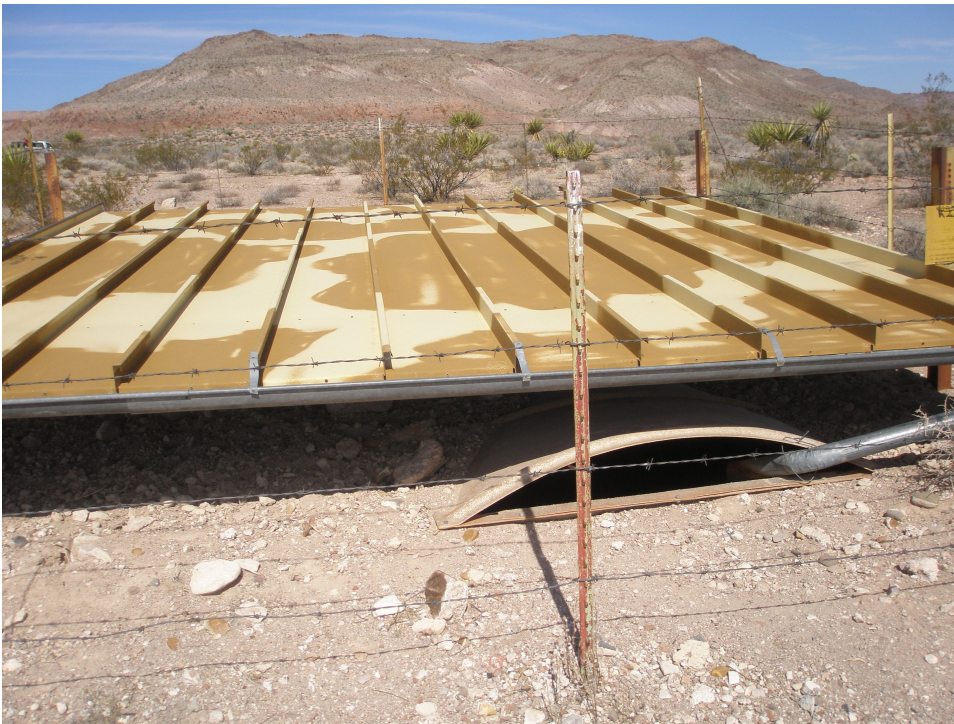


Figure 2.6. Example of a Fiberglass Small Game Wildlife Water Development

2.3. Description of Alternatives Analyzed in Detail

Alternative B: All Helicopter Access

Under this alternative, a helicopter would be allowed to land near each of the 20 big game wildlife water developments and off-load passengers, materials and equipment, as needed, for inspection, maintenance and repair of the wildlife water development. Landing zones have

been established for all big game water developments. Small game landing zones would utilize nearby closed or open routes, or identified landing sites. See Appendix A for helicopter landing zone distance to site.

If the landing is for a quick inspection, the pilot may land and wait for the inspection to be completed. Alternatively, if several developments are to be inspected by helicopter within proximity, passengers may be dropped off at one water development, while other passengers are dropped off at a second water development. For multiple water development inspections in a region, this pattern could continue, rotating groups of passengers from water development to water development, until all developments are inspected.

The minimization and avoidance measures under the proposed action would also apply to this alternative.

Alternative C: All Motorized or Mechanized Ground Transportation

Under Alternative C, wildlife water developments would be accessed using motorized or mechanized ground transportation to conduct inspection, maintenance, and repair. Modes of motorized transportation could include motorcycle, ATV, or 4WD truck. Motorized vehicle travel would be restricted to pre-existing disturbances, i.e., open or closed routes within wilderness. Roads were either cherry-stemmed when the wilderness was designated and are currently open to motorized vehicle access, or the routes were closed and rehabilitated after wilderness designation. Many of the water developments were installed along roads utilizing motorized vehicles. In this alternative, 9 of the wildlife water developments would be directly accessed by the closed routes within what is now designated wilderness. For 17 of the big and small game wildlife water developments, closed routes were identified but do not provide direct access to the sites. In these situations, motorized or mechanized ground transportation would utilize the closed routes to their identified endpoint, beyond which foot or pack stock would be utilized to reach the wildlife water development. For the remaining 9 big and small game wildlife water developments, there were no pre-existing closed routes identified within those portions of the wilderness that could provide access to site, and therefore access to these developments would be limited to foot and pack stock. Species of domestic animals known to have the potential to transmit disease causing catastrophic or chronic mortality to native wildlife would be prohibited. The closest vehicle access point to each water development is detailed in Appendix A.

The minimization and avoidance measures under the proposed action would also apply to this alternative.

Alternative D: All Foot and Stock Access

Under Alternative D, all wildlife water developments would be inspected by foot or pack stock. Travel would be cross-country and using designated trails where available. Materials and equipment would also be transported to the site by foot or pack stock when needed for maintenance or repairs. Species of domestic animals known to have the potential to transmit disease causing catastrophic or chronic mortality to native wildlife would be prohibited. Mileage and elevation change from the nearest legal motorized access point is detailed in Appendix A.

The minimization and avoidance measures under the proposed action would also apply to this alternative.

Alternative E: No Action

The No Action alternative, Alternative E, would continue to allow NDOW to inspect, maintain, and repair wildlife water developments annually, and on a case-by-case basis, in accordance with the existing Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife (Supplement No. 9, December, 2003). See Appendix B for examples of the case-by-case procedures and guidelines currently in effect.

2.4. Alternatives Considered but not Analyzed in Detail

No other action alternatives were needed to address unresolved conflicts concerning alternative uses of available resources.

2.5. Conformance

The EA is in conformance with the goals, objectives, and decisions of the following BLM Land Use Plans:

- Ely District Record of Decision and Approved Resource Management Plan (2008).
- Record of Decision for the Approved Las Vegas Resource Management Plan (1998).
- Sloan Canyon National Conservation Area Record of Decision for the Approved Resource Management Plan and Approval of the North McCullough Wilderness Management Plan (2006).

The EA would amend the goals, objectives, and decisions of the following BLM Land Use Plans:

- Delamar Mountains, Meadow Valley Range and Mormon Mountains Wilderness Final Wilderness Management Plan and Environmental Assessment (2009).
- Muddy Mountains Wilderness Final Wilderness Management Plan and Environmental Assessment (2007).
- North McCullough Wilderness Management Plan (2006).

Compliance with Laws, Statutes, and Regulations

The proposed action and alternative action are in compliance with the following laws:

- The Wilderness Act of 1964 (16 U.S.C. §§ 1131-1136, September 3, 1964, as amended 1978).
- The Federal Land Policy and Management Act of 1976 (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996).
- The Clark County Conservation of Public Land and Natural Resources Act of 2002 (Public Law 107-282).
- The Lincoln County Conservation, Recreation and Development Act of 2004 (Public Law 108-424).
- The National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347, January 1, 1970, as amended 1975 and 1994).

- Management of Designated Wilderness Areas (43 CFR Part 6300).
- Executive Order 13443: Facilitation of Hunting Heritage and Wildlife Conservation (2007).

Relationship to Policies and Guidelines

The proposed action and alternative action are in conformance with the following guidelines and manuals:

- Wildlife Management Guidelines (House Report No. 101-405, Appendix B).
- Management of Designated Wilderness Areas (BLM Manual 8560).
- Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife, Wildlife Management in Nevada BLM Wilderness Areas (BLM MOU 6300-NV930-0402) 2003.
- Meadow Valley, Arrow Canyon, and Delamar Habitat Management Plan for Bighorn Sheep. (BLM and NDOW) 1993.
- Rangewide plan for managing habitat of desert bighorn sheep on public lands. U.S. Department of the Interior. Gov Doc I53.2: B48.
- Mountain Sheep Ecosystem Management Strategy in the 11 Western States and Alaska. Fish and Wildlife 2000 series.

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Chapter 3. Affected Environment:

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The following items displayed in the tables below have been evaluated for the potential for significant impacts to occur, either directly, indirectly or cumulatively, due to implementation of the proposed action. The Mandatory Items for Consideration and Supplemental Authorities are displayed for the Ely District and Southern Nevada Districts in Table 1, below. Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely and Southern Nevada Districts in particular.

Rationales for those elements not analyzed are also listed in the table. These items will not be considered further in this document. The mandatory items that are considered in the EA are described and analyzed following the table in the Affected Environment and Environmental Consequences section.

Table 1. Mandatory Items for Consideration and Supplemental Authorities

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	No	Air Quality attainment status for the counties and areas in the project analysis area are published in Code of Federal Regulation — Title 40: Protection of Environment (40 CFR 81.329 — Nevada). The Proposed Action of Alternatives would not affect the attainment status for any of the seven criteria pollutants monitored in Nevada.
Areas of Critical Environmental Concern (ACEC)	No	Some of the wildlife water developments analyzed in this EA are located within the Kane Springs and Mormon Mesa ACECs for desert tortoise. Because the proposed action would not involve any new ground disturbance, no effects to the Kane Springs or Mormon Mesa ACECs are anticipated.
BLM Natural Areas	No	The proposed action is not located within North Pine Creek Natural Area.
Cultural Resources	No	<p>Since this project is only looking at maintenance of an existing project that does not disturb any additional surface area then according to Appendix C:2 of the State Protocol Agreement between the Bureau of Land Management, Nevada and the Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act (2009): "...modifying existing facilities that [does] not disturb additional surface area or historic properties [and] where the facility itself is not a historic property."</p> <p>In addition, the proposed undertaking is also exempted from Section 106 review as per Appendix C.5 of the 2009 State Protocol Agreement with the Nevada State Historic Preservation Office (SHPO): "Issuing...modifications...where there would be no change in use or surface disturbance." The areas of potential effect (APEs) have been disturbed from previous construction to the extent that the probability of finding intact cultural properties within the APEs is negligible. No further evaluation is necessary.</p>
Environmental Justice	No	No minority or low-income groups would be disproportionately affected by health or environmental effects. Concern is not present.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Fish and Wildlife excluding Federally Listed Species	No	<p>Ely District: None of the wildlife water developments are located within fish habitat. Some of the wildlife water developments analyzed in this EA are located in habitat for mule deer (<i>Odocoileus hemionus</i>) and elk (<i>Cervus canadensis</i>). Recommended seasonal timeframes for inspections in the proposed action would minimize impacts to individual animals. Temporary disturbance and/or displacement of mule deer or elk may occur during water development inspection, maintenance, and repairs, however, population-level effects are not anticipated.</p> <p>Southern Nevada District: Wildlife species in the general area include small mammals, rodents, birds and reptiles. These species may be found on the adjacent undisturbed lands and could wander into the proposed project area. Although there is no new surface disturbance associated with this project, primary direct impacts of the proposed action on wildlife would be mortality resulting from use of large motorized vehicles. Wildlife species in the general area are common and widely distributed throughout the area and the loss of some individuals and/or their habitat would have a negligible impact on populations of the species throughout the region.</p> <p>This project would be beneficial to desert bighorn sheep, a BLM Sensitive Species.</p>
Floodplains	No	The analysis area is not included on FEMA flood maps. The water developments are outside the 100- and 500- year floodplains.
Fuels/Fire Management	No	Normal conformance with seasonal fire restrictions is adequate. Restrictions can be in effect any time between May 15 and Oct. 1.
Greenhouse Gas Emissions	No	Currently there are no emission limits for suspected Greenhouse Gas (GHG) emissions, and no technically defensible methodology for predicting potential climate changes from GHG emissions. However, there are, and will continue to be, several efforts to address GHG emissions from federal activities, including BLM authorized uses.
Geology/Mineral Resources/Energy Production	No	The mineral estate will not be impacted by this activity.
Hydrologic Conditions	No	Southern Nevada District: The proposed action according to the MRDG includes minimal surface disturbance, there should be no impacts to hydrologic conditions.
Lands and Realty/Access	No	There are no conflicting Right-of-Ways within project area. As long as there is minimal surface disturbance created and any possible mechanized travel as well as foot or horse travel stay on designated and existing routes where possible, there are no issues.
Lands with Wilderness Characteristics	No	The proposed action is located in areas which have been determined to meet the elements of wilderness characteristics. The proposed action would not result in any surfaces disturbance, new developments, and all uses are temporary in nature. The project will be implemented in a manner that preserves the BLM's discretion to protect wilderness characteristics through subsequent land use planning.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Livestock Grazing	No	<p>Ely District: The developments lie within nine grazing allotments: Mormon Peak, Gourd Spring, White Rock, Delamar, Breedlove, Grapevine, Henrie Complex, Lower Lake East, Sunnyside. The project would not affect livestock grazing in the project area.</p> <p>Southern Nevada District: The proposed action at the Poppy Wildlife Water Development is within a portion of the Hidden Valley grazing allotment. The proposed action would not directly have an effect on livestock because they would avoid the area of activity due to vehicle noise and the presence of humans. Livestock would not be restricted from forage or water due to the multiple locations of those resources throughout the allotments.</p> <p>If cross county foot and/or stock travel occur, disturbance to available forage would be negligible. All other travel will remain on the existing trails, roads, and disturbed areas and there would be no loss of forage and no impacts to the available forage within the allotment. If livestock is near the area of activity they would be temporarily displaced and would likely move a reasonable distance away from the area of activity. Once participants move out of the area, livestock would return to their normal ranges within the allotments.</p> <p>The Safari, Jerry and Full Curl Wildlife Water Developments are not located in any authorized grazing allotments.</p>
Migratory Birds	No	Because no new ground disturbance is proposed, no population-level effects to migratory birds are anticipated. Recommended seasonal timeframes for inspections in the proposed action would minimize impacts to individuals.
Native American Religious Concerns and other concerns	No	No identified traditional religious or cultural sites of importance within the project area. The water developments already exist. Any visual and audible intrusions into the environment would be short term and temporary.
Noxious and Invasive Weed Management	No	Water developments may support weedy species that would not typically establish without increased water availability. The presence of weeds could reduce development effectiveness. Stipulations can be found in Appendix E.
Paleontological Resources	No	No fossil-bearing strata will be impacted by the undertaking as proposed.
Prime and Unique Farmlands	No	No Unique Farmlands are found in the State of Nevada. Prime Farmlands may exist in the analysis area however the Proposed Action and Alternatives would not affect the soil character or nature that led to the classification as Prime Farmlands. That is, the soils remain classified as Prime Farmlands and all that would be needed to place them into production would be the removal of the water development, irrigation with supplemental water, and removal of excessive salts.
Rangeland Health	No	The proposed action and alternatives would not affect the overall rangeland health of the area.
Recreation Uses	No	Proposed action may have minor social impacts to hikers in the backcountry. Any impacts would be temporary.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered	Yes	All of the large volume wildlife water developments are located within habitat for desert bighorn sheep (<i>Ovis canadensis nelsoni</i>), a BLM sensitive species. Some of the water developments in the Far South Egans wilderness are located within habitat for the greater sage-grouse (<i>Centrocercus urophasianus</i>), a BLM sensitive species. Two of the water developments in the Meadow Valley Mountains wilderness occur within approximately one mile of a previously recorded prairie falcon (<i>Falco mexicanus</i>) nest. One of the water developments in the Mormon Mountains wilderness occurs within approximately one mile of a previously recorded burrowing owl (<i>Athene cunicularia</i>) nest. Both prairie falcon and burrowing owl are BLM sensitive species. Recommended seasonal timeframes for inspections in the proposed action would minimize impacts to special status species. Special status animal species are analyzed in detail below.
Special Status Plant Species, other than those listed or proposed by the FWS as Threatened or Endangered	No	<u>Ely District Office:</u> One of the water developments in the Delamar Mountains wilderness is located near a population of white bearpoppy (<i>Arctomecon merriamii</i>), a BLM sensitive plant species. However, because the proposed action would not involve any new ground disturbance, no effects to special status plant species are anticipated. <u>Southern Nevada District:</u> Not present. Because the proposed action would not involve any new ground disturbance, no effects to special status plant species are anticipated.
Socio-Economics	No	This project will not disproportionately impact social or economic values.
Soil Resources	No	The Proposed Action and Alternatives would have undetectable effects to soil resources in and around the water developments. Maintenance activities would occur on previously disturbed surface soils.
Threatened or Endangered Species or critical habitat.	Yes	<u>Ely District Office:</u> Several of the wildlife water developments are located in habitat for the federally threatened desert tortoise (<i>Gopherus agassizii</i>). Some of the water developments are also located in the desert tortoise Mormon Mesa critical habitat unit. Recommended seasonal timeframes for inspections in the proposed action would minimize impacts to desert tortoise. Threatened or endangered species and critical habitat are analyzed in detail below. <u>Southern Nevada District:</u> The above proposed action has a no affect determination on the threatened desert tortoise (<i>Gopherus agassizii</i>). This project will have no affect on any other federally listed species or designated critical habitat. The proposed project sites are generally located at high elevation; therefore, tortoise habitat would be very low density, marginal at best. No impacts to desert tortoises are expected and no remuneration fees are required. Compliance with the special stipulations below will help to ensure that no affect to desert tortoise occurs. 1) Should a desert tortoise enter the project area, all activities will immediately stop until such time as the animal has left the area of its own accord. 2) A speed limit of 25 miles per hour shall be required for all vehicles travelling on the existing access road.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
		<p>3) Workers will be instructed to check underneath all vehicles before moving them as tortoises often take cover underneath parked vehicles.</p> <p>4) Staging and landing zones will be in previously disturbed areas.</p> <p>This notice will serve as the Section 7 Determination and no additional paperwork will be provided (Sec 7 Log # NV-052-12-015).</p>
Vegetative Resources	No	No additional disturbance of vegetative resources proposed for this project. Because the proposed action would not involve any new ground disturbance, effects to vegetative resources would be negligible.
Visual Resource Management (VRM)	No	The proposed action would not result in additional surface disturbance or new developments, and all activities are temporary in nature. The proposed action would preserve and retain the existing character of the landscape. No change to the characteristic landscape is anticipated. No direct or cumulative impacts to visual resources would occur.
Wastes, Hazardous or Solid	No	The proposed action or alternatives would not produce hazardous or solid waste. Participants will follow HazMat Stipulations as provided in Appendix E.
Water Resources	No	<u>Ely District Office</u> : The nature of such wildlife water developments preclude the sites being proximal to surface or groundwater locations. No water rights are needed in Nevada for the capture of atmospheric moisture. The Proposed Action of Alternatives would not affect Water Resources.
Water Resources/Quality (drinking/surface/ground)	No	<u>Southern Nevada District</u> : The proposed action according to the MRDG includes minimal surface disturbance, there should be no impacts to water resources.
Wilderness/WSAs	Yes	The proposed action is not located within or adjacent to WSAs or ISAs. The proposed action is located within Arrow Canyon Wilderness, Muddy Mountains Wilderness, North McCullough Wilderness, Mormon Mountains Wilderness, Far South Egans Wilderness, Delamar Mountains Wilderness and Meadow Valley Range Wilderness. These areas are managed so as to preserve their wilderness character and prohibits certain uses. The proposed action may result in impacts to these characteristics.
Wetlands/Riparian Zones	No	The nature of such wildlife water developments preclude the sites being proximal to surface or groundwater locations which are required to support riparian communities. As such, no riparian or wetland resources occur in the project area.
Wild Horses	No	<p><u>Ely District</u>: Horses may be temporarily displaced during inspection, maintenance and repair but will return to the area once the activities are concluded.</p> <p><u>Southern Nevada District</u>: The proposed maintenance projects are not located in active herd management areas, there will be no impacts to wild horses or burros.</p>

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Wild and Scenic Rivers	No	Not present.
Woodland/Forestry	No	The proposed action includes only minimal surface disturbance associated with cross country foot and stock travel. Staging areas are restricted to existing disturbed areas and vehicle access is limited to existing roads. Cactus and yucca may be present within the project impact area. Cactus and yucca are considered government property and are regulated under the Nevada BLM forestry program. To the extent practical, cacti and yucca within the project area should be avoided by this action. If cactus and yucca are unable to be avoided, impacts would be considered negligible.

Chapter 4. Environmental Effects:

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4.1. Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered

4.1.1. *Affected Environment*

All of the large volume wildlife water developments are located within habitat for desert bighorn sheep (*Ovis canadensis nelsoni*), a BLM sensitive species. Some of the water developments in the Far South Egans Wilderness are located within potential habitat (as identified by the Ely RMP) for the greater sage-grouse (*Centrocercus urophasianus*), a BLM sensitive species. Two of the water developments in the Meadow Valley Mountains Wilderness occur within approximately one mile of a previously recorded prairie falcon (*Falco mexicanus*) nest. One of the water developments in the Mormon Mountains Wilderness occurs within approximately one mile of a previously recorded burrowing owl (*Athene cunicularia*) nest. Both prairie falcon and burrowing owl are BLM sensitive species.

4.1.2. *Environmental Consequences*

Alternative A

The Proposed Action has the potential to result in disturbance and/or displacement of desert bighorn sheep. However, the use of helicopters would ensure adequate, efficient, and timely inspection of some of the water developments. The likely outcome that a portion of the water developments would be efficiently inspected and maintenance and/or repairs completed in a timely fashion would be a beneficial effect to desert bighorn sheep.

The proposed action would involve foot/pack access to water development MO-17 therefore impacts to burrowing owl are not anticipated.

Impacts to special status species would be minimal due to minimization measures and the lack of new ground disturbance.

Alternative B

This alternative has the potential to result in disturbance and/or displacement of desert bighorn sheep. However, the use of helicopters would ensure adequate, efficient, and timely inspection of all water developments. The likely outcome that all water developments would be efficiently inspected and maintenance and/or repairs completed in a timely fashion would be a beneficial effect to desert bighorn sheep.

Sage grouse, prairie falcon, and burrowing owl could be potentially disturbed and/or displaced by helicopter use.

Impacts to special status species would be minimal due to minimization measures and the lack of new ground disturbance.

Alternative C

This alternative has the potential to result in disturbance and/or displacement of desert bighorn sheep, sage grouse, prairie falcon, and burrowing owl. However, impacts to special status species would be minimal due to minimization measures and the lack of new ground disturbance.

*Chapter 4 Environmental Effects:
Special Status Animal Species, other than
those listed or proposed by the FWS as
Threatened or Endangered*

Alternative D

This alternative, although not mechanized, has the potential to result in disturbance and/or displacement of desert bighorn sheep. The number of people that hike out to inspect the water development and the presence of pack stock with the people could heavily influence the level of disturbance. Moreover, if equipment needed to perform repairs is not readily available during inspections (i.e. cannot be packed in), subsequent trips may be needed to the water source and could result in greater disturbance to desert bighorn sheep because of human presence on multiple rather than one occasion per year. In addition, the amount of time between discovery of need for repair or maintenance and a subsequent trip to perform the actual repairs could have catastrophic results for the desert bighorn sheep because of their heavy dependence on the water developments.

No Action Alternative

Minimization measures proposed under the other alternatives would not automatically apply under the MOU. Similar disturbances as analyzed under the other alternatives could occur because any combination of access for inspection, maintenance, and repair of water developments could be proposed annually.

4.2. Threatened or Endangered Species or Critical Habitat

4.2.1. Affected Environment

According to the Ely RMP, the following wildlife water developments in wilderness are also in desert tortoise habitat: Rowberry, Nerkspiffle, KS-21, KS-22, KS-23, KS-27, KS-28, KS-29, KS-32, MV-2, MV-3, MO-17, MO-28, MO-29, MO-30, MO-31, MO-34, MO-35, and West Mormon.

KS-27, KS-28, KS-29, and KS-32 are all located in Mormon Mesa critical habitat unit and Kane Springs ACEC for desert tortoise. MV-3 is located in Mormon Mesa critical habitat unit and Mormon Mesa ACEC for desert tortoise. The ground disturbing activity associated with installation of these water developments has already occurred, therefore, the footprint of the water developments no longer contains desert tortoise habitat.

4.2.2. Environmental Consequences

Alternative A

Impacts to desert tortoise and associated critical habitat would be avoided due to avoidance and minimization measures and the lack of new ground disturbance. The measures would ensure that no take of desert tortoises would occur. The proposed action would have no effect on desert tortoise and its associated habitat.

Alternative B

Inspection of all water developments using a helicopter would have no effect on desert tortoise or its habitat.

Alternative C

*Chapter 4 Environmental Effects:
Threatened or Endangered Species or Critical
Habitat*

DRAFT: December 1, 2011

This alternative inherently has the most potential to impact desert tortoise and its habitat. However, the avoidance and minimization measures would ensure that no take of desert tortoises would occur.

Alternative D

The avoidance and minimization measures would ensure that no take of desert tortoises would occur. This alternative would have no effect on desert tortoise or its associated habitat.

No Action Alternative

Avoidance and minimization measures for desert tortoise would not automatically be applied under the MOU. However, these measures could be applied under the BLM's authorization letter to NDOW under this alternative. Therefore, this alternative would have no effect on desert tortoise or its associated habitat.

4.4. Wilderness

4.4.1. *Affected Environment*

The United States Congress established the National Wilderness Preservation System to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States. Wilderness designation is intended to preserve and protect certain lands in their natural state. Only Congress, with Presidential approval, may designate public lands as Wilderness. The Wilderness Act of 1964 identifies wilderness uses and prohibited activities. Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, wilderness characteristics are commonly described as:

- **Untrammeled** — area is unhindered and free from modern human control or manipulation.
- **Natural** — area appears to have been primarily affected by the forces of nature.
- **Undeveloped** — area is essentially without permanent improvements or human occupation and retains its primeval character.
- **Outstanding opportunities for solitude or a primitive and unconfined type of recreation**— area provides outstanding opportunities for people to experience solitude or primeval and unrestricted recreation, including the values associated with physical and mental inspiration and challenge.
- **Supplemental values** — complementary features of scientific, educational, scenic or historic values.

Arrow Canyon Wilderness

About 35 miles north of Las Vegas, the Arrow Canyon Wilderness contains three distinct land forms. The west side is a spectacular cliff face, several thousand feet high, marked by a distinctive dark gray band of limestone arcing across the length of the range. The north-central portion of the wilderness area contains a wide valley cut by numerous washes, while the east side is characterized by a series of deep washes, including the nearly vertical sides of Arrow Canyon. Arrow Canyon is several miles long and is confined between sheer canyon walls. The canyon is so deep and narrow

in places that sunlight rarely reaches the bottom. Southern desert shrub and creosote bush scrub communities occur throughout the area. Mesquite/catclaw occurs in the northern portion and ash trees are found in the canyon bottom. Fossil corals, mollusks, brachiopods and other specimens are found in the area. Petroglyph panels, rock alignments and numerous other cultural resource features. Bighorn sheep inhabit the mountainous portions of the wilderness.

Delamar Mountains Wilderness

Several deep, twisting canyons issue from the central portion of the wilderness and extend into the southern bajada. The eastern mountainous region is composed of hills, peaks, washes, and draws. Many of the canyon areas have spectacular cliffs. The higher peaks in the central and eastern portions are good destinations for camping and provide expansive views of the nearby mountains and valleys, including the Delamar dry lakebed. This area provides steep, rugged terrain for desert bighorn sheep and a variety of raptors. The long sloping hills around the western and southern periphery of the wilderness area provide critical habitat for the threatened desert tortoise. The Delamar Mountains Wilderness encompasses a portion of the Kane Springs Desert Tortoise Area of Critical Environmental Concern and Mormon Mesa desert tortoise critical habitat unit. Sensitive species likely to be found in the wilderness area include the white bearpoppy and banded Gila monster. The cultural resources for this area include over a dozen cultural sites such as lithic scatters, shelters, rock art, milling sites, and an obsidian quarry.

Far South Egan Wilderness

The Far South Egan Wilderness consists primarily of an extremely rugged portion of the Egan Range. The west side of the range is characterized by spectacularly rugged limestone cliffs with multicolored strata. The Egan Range dramatically ascends 4,500 feet from the valley floor to form the spectacular limestone cliffs of the Far South Egan Range Wilderness. The area includes an unusual and scenic mix of ponderosa and bristlecone pine forest. Large stands of ponderosa exist at higher elevations (7,000 feet and above). The east side of the Egan Range is less rugged and supports a dense cover of woodlands, principally pinyon pine and juniper. Mule deer, elk, bighorn sheep, mountain lions, golden eagles, and ferruginous hawks are among the numerous wildlife species found in the mountains of the Far South Egan Wilderness. Other features of the Far South Egan Wilderness Area include an abandoned historic sawmill and a shingle mill. The shingle mill was in production around the early 1900's. Shingles were likely produced for the newly settled town of Lund, NV. Logging of ponderosa pine trees occurred around the turn of the 20th century. Whipple Cave lies in the northwestern portion of the wilderness area. Following a 70 foot descent, you are provided with 1,000 feet of known passages. Cave decorations include rimstone dams, draperies, and a huge column over thirty feet tall. The cave has sustained regular use, but because of the difficulty of entrance, use has been relatively light and the cave remains in a very natural state.

Meadow Valley Range Wilderness

The Meadow Valley Range Wilderness is boomerang-shaped, measuring approximately ten miles east to west, and arching about 36 miles from north to south. It consists of three major landforms: the long ridgeline of the Meadow Valley Mountains, a large bajada beginning high on the main ridge sloping easterly towards Meadow Valley Wash, and finally Bunker Hills five miles from the southern section of the central bajada. Fossils in the limestone hills give us snapshots of life hundreds of millions of years ago, when these high inland mountains were merely sediments accumulating at the bottom of the sea. The mountains themselves give a

bird's-eye view of nature's erosional forces at work. The various climates and elevations in the area provide important habitat for wildlife.

Mormon Mountains Wilderness

The Mormon Mountains region is a land of mountain ranges and canyons that offer colorful geology, majestic wildlife, amazing archaeological sites and beautiful country where one can escape city life. The Mormon mountains is a variable place: from rolling bajadas speckled with cholla, and yucca, to intricately carved canyons forested with pinyon pine and juniper. Finally, the area is crowned with jagged mountain peaks topped with stands of old-growth ponderosa pine. The Mormon Mountains Wilderness area provides important habitat for a variety of wildlife. The low elevations provide habitat for the desert tortoise, the banded Gila monster, desert banded gecko, the sidewinder and the long-nosed leopard lizard. Higher in the mountains, it's possible to spot desert bighorn sheep, and bobcats or mountain lions. An impressive variety of raptors live in the area: golden eagle, ferruginous hawk, red-tailed hawk, prairie falcon, Cooper's hawk, northern harrier, merlin and American kestrel. The geologic story of the Mormon Mountains includes ancient seas depositing sediments across what is now Nevada. These sediments collected seafloor and turned them into fossils, which can now be found in the limestone hills of Mormon Mountains. The mountains give a bird's-eye view of nature's erosional forces at work across the landscape. Throughout the Mormon Mountains region are some of the most amazing prehistoric sites in Nevada. In the area are literally thousands of archaeological sites that offer telling glimpses into the lives of people who lived in the area hundreds and thousands of years ago. The explorer might find petroglyphs, pictographs, agave roasting pits, prehistoric camp sites, rock shelters, grinding stones, and other evidence of past lives.

Muddy Mountains Wilderness

The Muddy Mountains Wilderness is about 20 miles northeast of Las Vegas. The Muddy Mountains consists of rugged limestone cliffs and canyons. Bitter Spring Valley, Bitter Ridge, Gale Hills and Hidden Valley are other major landform features. Creosote bush scrub with low-desert shrubs and grasses, including blackbrush, yucca, Joshua trees and desert willow. The area contains outstanding geologic features. Bitter Ridge provides a classic example of block faulting. Anniversary Narrows is dramatic and graphic example of the erosional forces of wind and water. Hidden Valley features a window through overthrust rock that exposes the underlying rock. Numerous archaeological resources occur in the area. The area has been identified as eligible for the National Register of Historic Places. Bighorn sheep and wild horses and burros inhabit the area. Reptiles found in the area include Western chuckwalla, desert banded gecko, side-blotched lizard, Great Basin collared lizard, and Great Basin whiptail.

North McCullough Wilderness

The wilderness contains the northern portion of the McCullough Range about 15 miles south of Las Vegas. Elevation span from 2000 feet at the eastern base of the range to 5,092 feet at Black Mountain. The peaks are volcanic in origin, rounded to flat-topped, and have a steep eastern escarpment and a gradual western slope. The area supports a unique combination of plants from the Mojave and Sonoran deserts and Great Basin ecosystems. The primary vegetation is a creosote bush community with barrel cactus, Joshua trees, cholla and prickly pear. The wilderness area is within the newly-designated Sloan Canyon National Conservation Area. Unlike other mountain ranges in Clark County, the McCullough Range is volcanic in origin. Examples of lava flows, ash falls and glassy zones are clearly visible. The area supports black gramma grass, which is not known to occur anywhere else in Nevada and stands of teddy bear cholla, which is the

northernmost extent of the species. Remarkable petroglyph panels and other important cultural resource features occur within the wilderness area.

4.4.2. Environmental Consequences

The wildlife water developments are existing improvements. The proposed action and alternatives relate solely to the inspection, maintenance and repair of the wildlife water developments. It does not apply to the entire replacement of parts of the developments, or to new developments.

Alternative A

Wilderness values of untrammeled, naturalness, undeveloped, and opportunities for solitude or primitive and unconfined recreation, as described below would be affected by the proposed action:

Untrammeled — This alternative would not affect the untrammeled quality of the wilderness because it does not manipulate or control the natural processes or conditions.

Naturalness — The water developments have been in place for 2–30 years; as a result wildlife has come to depend upon these water sources. The wildlife water developments are installed to mitigate for loss of habitat and natural water sources as a result of human activity elsewhere.

Undeveloped — For 15 of the developments, the access method would utilize motorized transport (helicopter) which is considered a temporary development in wilderness; therefore, it is a negative effect on the undeveloped quality. For the remaining 20 developments, no motorized transport would be used for access (Foot/Pack stock). None of the developments are proposed for motorized ground vehicle access. For all of the developments, motorized tools (e.g. power drills, power saws, generators) or mechanical transport (e.g. wheelbarrows or carts) would be permitted for repairs and maintenance on an as needed basis in the seven wilderness areas. This does not include bicycles, helicopters or motor vehicles. Use of motorized tools would also constitute a temporary impairment to the undeveloped quality of wilderness.

Opportunities for Solitude or Primitive and Unconfined Recreation— Opportunities for solitude would be temporarily affected during over flight and landing of the helicopter for the 15 developments for which helicopter access is proposed. Most of the wildlife water developments are located in remote areas, and therefore negative impacts to solitude from foot or pack stock may occur during inspection, maintenance, and repair activities although would be minimal as the activity is temporary in nature and localized. No effects to primitive or unconfined recreation would occur under this alternative.

Alternative B

Wilderness values of untrammeled, naturalness, undeveloped, solitude or primitive and unconfined recreation, would be affected, as described below, by Alternative B: All Helicopter Access:

Untrammeled — This alternative would not affect the untrammeled quality of the wilderness because it does not manipulate or control the natural processes or conditions.

Naturalness — The water developments have been in place for 2–30 years; as a result wildlife has come to depend upon these water sources. The wildlife water developments are installed to mitigate for loss of habitat and natural water sources as a result of human activity elsewhere.

Undeveloped — This Alternative would access the developments with motorized transport (helicopter) which is considered a temporary development in wilderness; therefore, it is a negative effect on the undeveloped quality. For all of the developments, motorized tools (e.g. power drills, power saws, generators) or mechanical transport (e.g. wheelbarrows or carts) would be permitted for repairs and maintenance on an as needed basis in the seven wilderness areas. This does not include bicycles, helicopters or motor vehicles. Use of motorized tools would also constitute a temporary impairment to the undeveloped quality of wilderness.

Opportunities for Solitude or Primitive and Unconfined Recreation- Opportunities for solitude would be temporarily affected during over flight and landing of the helicopter. No effects to primitive or unconfined recreation would occur under this alternative.

Alternative C

Wilderness values of untrammeled, naturalness, undeveloped, solitude or primitive and unconfined recreation, would be affected, as described below, by Alternative C: All Ground Motorized Vehicle Access:

Untrammeled — This alternative would not affect the untrammeled quality of the wilderness because it does not manipulate or control the natural processes or conditions.

Naturalness — The water developments have been in place for 2–30 years; as a result wildlife has come to depend upon these water sources. The wildlife water developments are installed to mitigate for loss of habitat and natural water sources as a result of human activity elsewhere.

Undeveloped — This Alternative would access the developments with motorized transport (truck, ATV or motorcycle) which is considered a temporary development in wilderness; therefore, it is a negative effect on the undeveloped quality. This alternative is valid for only 26 of the developments — vehicles would be able to directly access 9 of the wildlife water developments, while 17 would be able to be accessed part way by motorized ground vehicle. For all of the developments, motorized tools (e.g. power drills, power saws, generators) or mechanical transport (e.g. wheelbarrows or carts) would be permitted for repairs and maintenance on an as needed basis in the seven wilderness areas. This does not include bicycles, helicopters or motor vehicles. Use of motorized tools would also constitute a temporary impairment to the undeveloped quality of wilderness.

Opportunities for Solitude or Primitive and Unconfined Recreation- Opportunities for solitude would be temporarily affected during use of motorized vehicles. No effects to primitive or unconfined recreation would occur under this alternative.

Alternative D

Wilderness values of untrammeled, naturalness, undeveloped, solitude or primitive and unconfined recreation, would be affected, as described below, by Alternative D: All Foot or Pack Stock Access:

Untrammeled — This alternative would not affect the untrammeled quality of the wilderness because it does not manipulate or control the natural processes or conditions.

Naturalness — The water developments have been in place for 2–30 years; as a result wildlife has come to depend upon these water sources. The wildlife water developments are installed to mitigate for loss of habitat and natural water sources as a result of human activity elsewhere.

Undeveloped — This Alternative would access the developments by foot or using pack stock, therefore having no effect on the undeveloped quality of wilderness. For all of the developments, however, motorized tools (e.g. power drills, power saws, generators) or mechanical transport (e.g. wheelbarrows or carts) would be permitted for repairs and maintenance on an as needed basis in the seven wilderness areas. This does not include bicycles, helicopters or motor vehicles. Use of motorized tools would also constitute a temporary impairment to the undeveloped quality of wilderness.

Opportunities for Solitude or Primitive and Unconfined Recreation— The developments are generally in remote locations and access by foot and pack stock would be primarily off-trail. Any encounters with recreationists would likely negatively impact solitude of the casual wilderness visitors since the expectation of encountering others would be low. If inspection of the developments were performed by one or two people on foot, impact on solitude would be low. However, if maintenance or repairs require large groups or a number stock to transport materials, multiple round trips in a single day, or multi-day visits, the impact to solitude would be far greater. The one exception would be the Poppy development which can be access by a designated trail. Recreationists on trails generally have lower expectations for solitude, therefore encounters may have less of an impact on their feelings of solitude.

Chapter 5. Cumulative Effects

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The purpose of the cumulative impacts analysis for the proposed action is to evaluate the combined, incremental effects of human activity within the scope of the project (the seven wilderness areas). The Council on Environmental Quality (CEQ) regulations define scope and state that connected actions, cumulative actions, and similar actions should be included in the impact analysis (40 CFR 1508.25). The Council on Environmental Quality formally defines cumulative impacts as follows:

...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR 1508.7)

Moreover, according to the 1997 CEQ Handbook *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative impact analysis can be focused on those issues and resource values identified during scoping that are of major importance. Relevant issues identified during scoping for the proposed action relate to the following: impacts to wilderness, effectiveness and efficiency of access methods, and desert tortoise.

Past Actions

Wilderness Management plans have been completed for five of the seven wilderness areas in question. Activities within these wilderness areas have included implementing activity plans such as restoration of former vehicle routes to a natural state, completing trailhead parking areas and installing signs and informational kiosks, and construction of hiking trails. Installation of wildlife water developments occurred over the past 30 years with inspection occurring annually and maintenance occurring, as needed. Emergency actions have included water hauls via helicopter to the Poppy wildlife water development to prevent this water source from going dry. The NDOW has conducted gathers of bighorn sheep via helicopter for transplanting to other areas, including Delamar Mountains Wilderness in December, 2007.

Present Actions

Mt. Grafton, Highland Ridge, Far South Egans and South Egan Range Wilderness Management Plan and EA is in progress and is anticipated for completion in 2012. In this plan the BLM is considering removal of the Picked-Up wildlife water development in the Far South Egans Wilderness. Implementation of actions covered in the Delamar Mountains, Meadow Valley Range and Mormon Mountains WMP and EA is largely completed (sign installation, staging area established, restoration of disturbances is on-going). An Emergency Stabilization & Restoration project is planned for winter 2012 in the Meadow Valley Range Wilderness, and will be ongoing over the next three years. The Arrow Canyon Wilderness Management Plan and EA is in progress and a decision is anticipated for 2012. Actions include implementing the current wilderness plans for Muddy Mountains Wilderness and North McCullough Wilderness including restoring former vehicle routes to a natural state, removing pre-wilderness dams, creating trailheads with information signs and completing trail construction, and conducting weed treatments. The Southern Nevada District is also currently analyzing NDOW's request to upgrade the existing Poppy wildlife water development.

Reasonably Foreseeable Future Actions

Implementation of actions determined in the WMPs (listed above) would occur. Future wildland fire management activities, including, when necessary, Emergency Stabilization & Rehabilitation (ESR) projects. Weed treatments may be required in the future. Bighorn Sheep gathers and releases may be requested by NDOW in the future with site-specific NEPA occurring at that time. If increasing recreation pressure occurs, actions to facilitate and handle the increases may be considered. The two Wilderness Management Plans and associated EAs which include the Far South Egans Wilderness and Arrow Canyon Wilderness are anticipated for completion in 2012.

Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 6.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Michael Burroughs, U.S. Fish and Wildlife Service	Discussed proposed action on November 2, 2011.	Avoidance and minimization measures are sufficient to support a finding of “no effect” on desert tortoise and critical habitat.
Bradford Hardenbrook, Nevada Department of Wildlife	Participated at the Caliente scoping meeting on October 25, 2011.	Background and input on inspection, maintenance and repair of wildlife water developments
Craig Stevenson, Nevada Department of Wildlife (Retired)	Clarification of landing zone locations for wildlife water developments.	Provided data with locations of landing zones for use in analysis.

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Chapter 7. List of Preparers

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Table 7.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Alicia Styles	Wildlife Biologist	ACEC, Fish and Wildlife, Migratory Birds, Special Status Species (Plants and Animals), and Threatened and Endangered Species
Amanda Anderson	Rangeland Management Specialist	Livestock Grazing
Benjamin Noyes	Wild Horse & Burro Specialist	Wild Horse & Burros
Boris Poff	Hydrologist	Hydrology
Cameron Boyce	Rangeland Management Specialist	Livestock Grazing
Chris Hanefeld	Public Affairs	Public Affairs
Lisa Domina	Outdoor Recreation Planner	Recreation, Transportation & Travel, Visual Resources
Elvis Wall		Native American Interests
Erica Husse	ESR Coordinator	Noxious & Invasive Weeds, ESR
Sendi Kalcic	Wilderness Specialist	Wilderness
Emily Simpson	Wilderness Planner	Wilderness
Fred Edwards	Botanist	Vegetation
George Varhalmi	Geologist	Minerals
Gloria Tibbetts	Planning & Environmental Coordinator	NEPA
Greg Marfil	Fire Management Specialist	Fire
Hillierie Patton	Public Affairs	Public Affairs
Jessica Stegmeier	Wildlife Biologist	Wildlife
Jill Craig	Weeds Specialist	Weeds
John Evans	Planning & Environmental Coordinator	NEPA
Katherine Kleinick	Natural Resource Specialist	Vegetation
Kerri-Anne Thorpe	Realty Specialist	Realty
Kirsten Cannon	Public Affairs	Public Affairs
Krystal Johnson	Wild Horse & Burro Specialist	Wild Horses
Kyle Teel	Fire Management Specialist	Fire
Lisa Christianson		Air Quality
Marilyn Peterson	Outdoor Recreation Planner	Recreation
Mark D'Aversa	Natural Resource Specialist	Air Quality, Water Quality, Farmlands, Watershed Management, Floodplains, Water Resources, Wetlands/Riparian zones
Michael Moran	Environmental Protection Specialist	Wastes, Hazardous or Solid
Nancy Williams	Wildlife Biologist	Fish and Wildlife, Migratory Birds, Special Status Species (Animals)
Nicholas Pay	Archaeologist	Cultural Resources & Paleontology
Sam Styles	Wilderness Ranger	Wilderness
Susanne Rowe	Archaeologist	Cultural Resources
Travis Young	Planning & Environmental Coordinator	NEPA

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Appendix A.

Appendix A: Summary of Wildlife Water Development Access Analysis and the Proposed Action

Wildlife Water Development Name	Type	Wilderness	Year of Installation	Installation Method	Type of Tank System	Capacity (gallons)	Helicopter LZ distance to site	Nearest Vehicle access to site	Foot Distance to site from nearest access point	Elevation Gain / Loss	Proposed Action
Don Rowberry (Delamar #4)	Big Game	Delamar Mountains	2002	Helicopter	BOSS Tanks Self-Leveling	7256	30 m	0.7 mi (via non-wilderness corridor) OR 3.1 mi	0.7 mi (via non-wilderness corridor) OR 3.1 mi from old highway	450' / -140'	Foot/pack
Ford (Delamar #1)	Big Game	Delamar Mountains	1997	Helicopter	BOSS Tanks Self-Leveling	7186	75 m	2.3 mi to nearest road; (closed 1.5 mi)	3.8 mi	1294' / -110'	Helicopter
Judy (Delamar #6)	Big Game	Delamar Mountains	2000	Helicopter	BOSS Tanks Self-Leveling	7132	0.5 mi	4.9 mi to nearest road	4.92 mi	1446' / -51'	Helicopter
Nerkspiffle (Delamar #2)	Big Game	Delamar Mountains	1997	Helicopter	BOSS Tanks Self-Leveling	7256	75 m	0.3 mi to nearest road	0.3 mi	472' / -7'	Foot/pack
Matt Brown - Delamar #3	Big Game	Delamar Mountains	2002	Helicopter	BOSS Tanks Self-Leveling	8233	0.1 mi	6.7 mi to nearest road	4.7 mi (via non-wilderness corridor) mi OR 6.71	From corridor: 2340' / 1009' From Hwy: 2255' / -128'	Helicopter
Tsukamoto (Delamar #5)	Big Game	Delamar Mountains	2000	Helicopter	BOSS Tanks Self-Leveling	7132	0.2 mi	3.2 mi to nearest road	3.22 mi	1858' / -138'	Helicopter
KS #22	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At site	To site (1.5 mi on closed road)	1.5 mi	199' / -9'	Foot/Stock
KS #23	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At site	0.3 mi	0.3 mi	91' / 0'	Foot/Stock
KS #24	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At site	300' from site (1.5 mi on closed road)	1.5 mi	274' / -1'	Foot/Stock
KS #27	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At Site	To site (50 m on closed road)	50 m	0' / -9'	Foot/Stock

Wildlife Water Development Name	Type	Wilderness	Year of Installation	Installation Method	Type of Tank System	Capacity (gallons)	Helicopter LZ distance to site	Nearest Vehicle access to site	Foot Distance to site from nearest access point	Elevation Gain / Loss	Proposed Action
KS #28	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At site	0.3 mi	0.3 mi	39' / 0'	Foot/Stock
KS #29	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	At site	To site (0.5 mi on closed road)	0.5 mi	64' / 0'	Foot/Stock
KS #32	Small Game	Delamar Mountains	1979-1981	Vehicle	Fiberglass	750	65 m	To site (2.1 mi on closed road)	150 m	0' / -20'	Foot/Stock
Derico (Egan #4)	Big Game	Far South Egans	1985	Helicopter	Saucer	4200	150 m	1.0 to nearest road; (0.3 miles on closed road)	1.3 mi	1753' / -35	Helicopter
Pick-Up (Egan #3)	Big Game	Far South Egans	1985	Vehicle	Saucer	4200	0.2 mi	To Site (0.2 mi on closed road)	0.2 mi	172' / -1'	Foot/Stock
Riski (Egan #2)	Big Game	Far South Egans	1985	Helicopter	Saucer	4200	77 m	1.8 mi to nearest road (0.2 mile closed road)	2.0 mi	2282' / -78'	Helicopter
Virginia Frehner - Meadow Valley #2	Big Game	Meadow Valley Range	1999	Helicopter	Cylinder w/ Float box	6750	130 m	0.8 mi to nearest road	0.8 mi	381' / -93'	Helicopter
Mr. Shameless (Meadow Valley #3)	Big Game	Meadow Valley Range	2009	Helicopter	BOSS Tanks Self-Leveling	7288	100 m	2.3 mi to nearest road	2.3 mi	1403' / -356'	Helicopter
Stoudt (Meadow Valley #4)	Big Game	Meadow Valley Range	2001	Helicopter	BOSS Tanks Self Leveling	7578	At site	1.2 mi to nearest road	1.2 mi	1026' / -124'	Helicopter
Hackberry (Mormon #5)	Big Game	Mormon Mountains	1991	Helicopter	Cylinder w/ Float box	5900	90 m	2.0 mi to nearest road; (1.3 mi on closed road)	3.3 mi	1357' / -257'	Helicopter
Prospect (Mormon #3)	Big Game	Mormon Mountains	1981	Helicopter	Cylinder w/ Float box	6200	80 m	1.0 mi to nearest road	1.0 mi	934' / -91'	Helicopter
Rocky (Mormon #2)	Big Game	Mormon Mountains	1981	Helicopter	Cylinder w/ Float box	4650	0.1 mi	1.3 mi (0.1 mi on closed road)	1.4 mi	310' / -48'	Helicopter

Wildlife Water Development Name	Type	Wilderness	Year of Installation	Installation Method	Type of Tank System	Capacity (gallons)	Helicopter LZ distance to site	Nearest Vehicle access to site	Foot Distance to site from nearest access point	Elevation Gain / Loss	Proposed Action
West Mormon (Mormon #4)	Big Game	Mormon Mountains	1991	Helicopter	Cylinder w/ Float box	4900	100 m	1.7 via closed road and 0.2 cross-country	1.8 mi	1068' / -1109'	Helicopter
MO 17	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	At site	To site (0.1 mi on closed road)	0.1 mi	3' / -42'	Foot/pack
MO 18	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	115 feet	115 feet	115 feet	9' / 0'	Foot/pack
MO 28	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	At site	To site (0.9 miles on closed road)	0.9 mi	263' / -44'	Foot/Stock
MO 29	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	At site	To site (50 m on closed road)	50 m	7' / -7'	Foot/Stock
MO 30	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	100'	1.2 mi	1.3 mi	102' / -39'	Foot/Stock
MO 31	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	0.1 mi	0.1 mi	0.1 mi	15' / -13'	Foot/Stock
MO 34	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	At site	To site (1.4 miles on closed road)	1.4 mi	319' / -4'	Foot/Stock
MO 35	Small Game	Mormon Mountains	1981-1982	Vehicle	Fiberglass	750	0.5 mi	0.5 mi	0.5 mi	137' / -2'	Foot/Stock
Full Curl (Arrow Canyon #3)	Big Game	Arrow Canyon	1998	Helicopter	Cylinder w/ Float box	6750	289 m	1.0 mi.	1.0 mi.	951' / -50'	Helicopter
Jerry (Muddy #4)	Big Game	Muddy Mountains	1989	Helicopter	Cylinder w/ Float box	6750	182 m	1.81 mi.	1.81 mi.	824' / -106'	Helicopter
Safari (Muddy #5)	Big Game	Muddy Mountains	1994	Helicopter	Cylinder w/ Float box	6750	274 m	900 ft.	0.49 mi.	316' / -46'	Foot/Stock
Poppy (North McCullough #2)	Big Game	North McCullough	1985	Helicopter	Cylinder w/ Float box	4800	100 m	330 ft.	1.08 mi.	450' / -323'	Foot/Stock

Appendix B.

Appendix B: Excerpts From Current Wilderness Management Plans

For 28 of the water developments, authorizations are currently processed and approved under the Delamar Mountains, Meadow Valley Range, and Mormon Mountains WMP and EA (December 9, 2009). The following is taken from the WMP:

Wildlife Water Developments

Inspections

All wildlife water developments encompassed by these wilderness areas [Delamar Mountains, Meadow Valley Range and Mormon Mountains] require routine inspection. Inspections will be conducted annually by BLM wilderness staff with assistance from volunteers using non-motorized and non-mechanized means. During inspection, water storage levels, wildlife use, and major repair needs will be noted. Minor repairs may be made during these inspections and a report will be given to NDOW regarding the condition of each wildlife water facility.

Emergency Maintenance and Minor Repair

From time to time, it may be necessary for NDOW to conduct over-flights and visual surveillance of water developments within the three wilderness areas in order to determine if emergency maintenance and/or minor repair of plumbing components such as tanks, drinkers, and pipes is required. If maintenance and/or repairs are needed, are judged to be critical for the survival of animals, and/or are needed to negate more costly repairs at a later date, a helicopter may land to conduct the needed maintenance or repair. Immediately after emergency maintenance and/or minor repairs are completed, NDOW will notify the BLM Ely District Manager with regard to: 1) the wilderness area visited, 2) the name of the water development and the location, and 3) the nature of the emergency maintenance or repair completed.

Complex Maintenance and Repair

If a problem cannot be fixed during the over-flight of water developments and more complex or complicated maintenance and/or repairs are needed that require a subsequent visit to the site, NDOW may submit a written request to the Ely District Manager for permission to land a helicopter at the site for further maintenance and/or repairs. The following information must be provided in writing by NDOW to the Ely District Manager:

- Name of the wilderness area
- Name and location of the water development
- Identification of the problem and the maintenance and/or repairs needed
- Type of motorized and mechanized equipment desired
- Proposed dates of the maintenance/repair
- An estimate of the number of persons to be involved
- The estimated number of landings to be made

The Ely District Manager will respond to NDOW's written request within two weeks of receipt of the request. The District Manager will issue a public notification as a courtesy to the public, merely to provide the information contained in NDOW's request, not to solicit public review or comment. A MRDG will be completed by the Ely District as a means of documenting the analysis and evaluation of NDOW's request. It will not be necessary for the Ely District to complete a NEPA analysis or any decision documents, other than a letter of written authorization to NDOW with appropriate terms, conditions, and stipulations attached.

The effects of helicopter landings in the three wilderness areas are analyzed in the accompanying environmental analysis for this wilderness management plan. A report will be completed annually by the BLM Wilderness Planner to document all landings and motorized and mechanized equipment used to conduct complex maintenance and repairs.

The Muddy Mountains Wilderness Final Wilderness Management Plan and Environmental Assessment (2007) provides the following guidance for the wildlife water developments:

"Inspection and maintenance of facilities will take place by non-motorized means except for major maintenance requiring large parts or tools which cannot be transported by foot or pack stock.....motorized equipment requires approval by BLM..."

The North McCullough Wilderness Management Plan (2006) provides the following guidance on wildlife water developments: "In order to provide guidance and procedures for coordination and cooperation between the BLM and the NDOW regarding the management of wildlife within the North McCullough Wilderness, the MOU (BLM 2003b) between the BLM and NDOW will be followed."

Appendix C.

Appendix C: HazMat Stipulations — Hazardous Material/Pesticides/Liability

Southern Nevada District

1. No hazardous material, substance, or hazardous waste, (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.*, or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) shall be used, produced, transported, released, disposed of, or stored within the right-of-way area at any time by the Lessee. The Lessee shall immediately report any release of hazardous substances (leaks, spills, etc.) caused by the Lessee or third parties in excess of the reportable quantity as required by federal, state, or local laws and regulations. A copy of any report required or requested by any federal, state or local government agency as a result of a reportable release or spill of any hazardous substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved federal, state or local government agency.
2. The Lessee shall immediately notify the Authorized Officer of any release of hazardous substances, toxic substances, or hazardous waste on or near the lease potentially affecting the lease of which the Lessee is aware.
3. As required by law, Lessee shall have responsibility for and shall take all action(s) necessary to fully remediate and address the hazardous substance(s) on or emanating from the lease.
4. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the Lessee shall obtain from the Authorized Officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers and any other information deemed necessary by the Authorized Officer. The plan shall be submitted no later than December 1 of any calendar year that covers the proposed activities for the next fiscal year. Pesticides shall not be permanently stored on public lands authorized for use under this lease.
5. The Lessee shall comply with all applicable local, state, and federal air, water, hazardous substance, solid waste, or other environmental laws and regulations, existing or hereafter enacted or promulgated. To the full extent permissible by law, the Lessee agrees to indemnify and hold harmless, within the limits, if any, established by state law (as state law exists on the effective date of the right-of-way), the United States against any liability arising from the Lessee's use or occupancy of the lease, regardless of whether the Lessee has actually developed or caused development to occur on the lease, from the time of the issuance of this lease to the Lessee, and during the term of this lease. This agreement to indemnify and hold harmless the United States against any liability shall apply without regard to whether the liability is caused by the Lessee, its agents, contractors, or third parties. If the liability is caused by third parties, the Lessee will pursue legal remedies against such third parties as if the Lessee were the fee owner of the lease.
6. Notwithstanding any limits to the Lessee's ability to indemnify and hold harmless the United States which may exist under state law, the Lessee agrees to bear all responsibility (financial or other) for any and all liability or responsibility of any kind or nature assessed against the

United States arising from the Lessee's use or occupancy of the lease regardless of whether the Lessee has actually developed or caused development to occur on the lease from the time of the issuance of this lease to the Lessee and during the term of this lease.

Appendix D.

Appendix D: Invasive Species Stipulations

Ely District Office

1. When manual weed control is conducted, remove the cut weeds and weed parts and dispose of them in a manner designed to kill seeds and weed parts.
2. Where appropriate, inspect source sites to ensure they are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
3. Weed infestations should be reported to the BLM Invasive Species Coordinator
4. Vehicles used to access sites should be free of mud and other debris that could transport weed seed.
5. Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.

Southern Nevada District Office

1. Ensure that all personnel and equipment are clean and free of soil and vegetation before site entry, and between each development if multiple sites are visited during one trip.
2. When feasible, prioritize work (or helicopter landing) in areas free of weeds before working in infested areas to reduce the spread of weeds.
3. Please refer to Weed Specialist prior to treating infested areas.
4. Non-native plant material that is removed surrounding developments should be bagged and disposed of off-site.
5. Please report any observed weed infestations to Weed Specialist.